

DO ARMS HAVE INFLUENCE?  
EXPLORING THE EFFECT OF TRANSFERRED WEAPONS' MILITARY  
CAPABILITIES ON RECIPIENTS' LEVEL OF FOREIGN POLICY COOPERATION

ИМЕЕТ ЛИ ОРУЖИЕ ПОЛИТИЧЕСКОЕ ВЛИЯНИЕ?  
ИЗУЧЕНИЕ ВЛИЯНИЯ ТЕХНИЧЕСКИХ ХАРАКТЕРИСТИК ПОСТАВЛЕННОГО  
ОРУЖИЯ НА УРОВЕНЬ ВНЕШНЕПОЛИТИЧЕСКОГО СОТРУДНИЧЕСТВА  
ГОСУДАРСТВА – ПОЛУЧАТЕЛЯ

ҚАРУ-ЖАРАҚТЫҢ САЯСИ ЫҚПАЛЫ БАР МА?  
ҚАБЫЛДАУШЫ МЕМЛЕКЕТТІҢ СЫРТҚЫ САЯСАТЫНА ЖЕТКІЗІЛГЕН ҚАРУ-  
ЖАРАҚТЫҢ ТЕХНИКАЛЫҚ МІНЕЗДЕМЕЛЕРІНІҢ ТИГІЗЕТІН ӘСЕРІН ЗЕРТТЕУ

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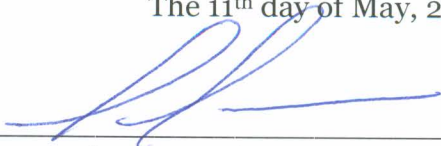
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### **Abstract**

This thesis investigates the impact of transferred weapons' military capabilities on recipients' level of foreign policy cooperation. While previous research use financial data to assess the impact of transferred arms, I directly look at the technical characteristics of delivered weapons in order to evaluate their effect on importer states' behavior. I partially draw on Fearon's (1998) theory of foreign policy cooperation and extend it. Particularly, in my theory I consider both formal and informal cooperation processes. I argue that recipients take into account the type and sophistication level of transferred weapons while deciding whether to adjust their foreign policies or not. The results of statistical analyses suggest that this proposition holds for some categories of arms while not for the others. Namely, theoretical expectations were supported statistically for aircraft category in general and transport aircraft in particular. By using new measure for the evaluation of weapon shipments, the findings of the project contribute to scholarly literature on arms transfers, influence and foreign policy decision-making.



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## Chapter 1

### Introduction

Arms transfers are a long-known foreign policy instrument that is used by states to influence each other's decision-making calculus and affect the outcome of both interstate and intrastate conflicts (Keller and Nolan 1997; Sanjian 1999). For instance, according to the U.S. government, provision of defense articles maximizes the United States' influence and strengthens its security (Department of State. The Office of Website Management 2014). Particularly, it is expected that arms transfers, as well as training and maintenance services that accompany every arms deal, are supposed to make the recipient more cooperative in its foreign policy. However, the link between arms supplies and recipients' foreign policy cooperation is not as simple as it looks at the first sight.

Among 191 American attempts to influence recipients' policy choices between 1950 and 1992 more than a half (58%) ended up with failure (Sislin 1994). Moreover, Sullivan et al. (2011) found that those states that receive American military aid tend to be less cooperative in their behavior than the states that are not recipients of such aid. Hence, the discrepancy between the United States' expectations and recipients' actual behavior constitutes a puzzle.

Moreover, despite the fact that both international relations (Sislin 1994; Sullivan, Tessman, and Li 2011) and comparative politics scholars (Paul 1992; Tal 2006; Wheelock 1978) look at conditions under which arms influence attempts succeed, there was surprisingly little attention paid to the role of transferred weapons' type. As it was put by Johnson (2015, 2), "arms transfers are unique and asymmetric because at their core they are transfers of power from one state to another and different type of weapons provide different types of power, yet arms transfers are rarely examined in this light." In other words, weapons are not homogenous and

their impact on the recipient should differ depending on the technical characteristics that transferred weapons' possess.

In order to fill this lacuna, I investigate the impact of weapons' strategic capabilities on the recipients' foreign policy behavior. This research question is particularly important because it has direct policy implications. It aims to define key factors that make a recipient state adjust its foreign policy – both formally and informally – to donor's desires.

Three types of scholarly literature provide a foundation for this project. The first one deals with the motivation behind a supplier's decision to supply arms (e.g. Krause 1991; Sanjian 1991). The second one investigates the reasons why a recipient decides to import weapons (Morrow 1993; Pearson 1989; Suchman and Eyre 1992). The third one focuses on the impact of arms relations on recipient's behavior (e.g. Kinsella 1994, 1998; Sanjian 1999).

By looking at the decision-making process within the supplier country we can understand that arms trade is not free (Levine et al. 1997; Willardson 2013). Moreover, Baugh and Squires (1983) offer some evidence that there is a hierarchy of transferred weapons. They conclude that “[a]s hypothesized, there are progressively fewer transfers at the higher levels of sophistication and firepower, and there is a tendency for the sophistication of weapons transferred into a region to escalate over time” (Baugh and Squires 1983, 62). Thus, even though a recipient might have a financial capability to buy arms, they might be simply unavailable to him.

In turn, Kinsella (1998) investigates the relationship between arms transfer dependence and recipient's foreign policy. More specifically, he claims that arms transfers as a phenomenon have two dimensions such as political and military. Kinsella (1998) concludes that each dimension exerts different influence over states' behavior. Military dimension represents an acquisition of military capabilities, while political dimension deals with arms transfer dependence of a recipient. Consequently, improvement in military capabilities makes a recipient more conflict-prone. Conversely, dependence on arms imports decreases recipient's

eagerness to be engaged in a militarized dispute, because the provider may curtail weapon shipments at any moment which will drastically affect recipient's ability to wage wars.

Sislin (1994), Tal (2006) and Paul (1992) exclusively research circumstances that favor the success of influence attempts. However, they either look at context, or use financial data to assess the overall dependence.

Context undoubtedly plays a crucial role in defining influence attempt's outcome. However, it is noteworthy that weapons are valuable on their own too. The reason is that they are seen as symbols of immediate power and security (Baldwin 2002). Consequently, weapon shipments represent power release into the international system (Johnson 2015). Since weapons are not all the same and classified into different categories according to their sophistication level – small arms, major weapons and weapons of mass destruction, supplier's ability to influence should also be directly connected to the kind of weapons that he exports. Thus, I hypothesize that weapons' type have an independent impact on the level of cooperation that a recipient will exhibit.

The contributions of this project are as follows. I model strategic interactions between the actors by using bargaining theory. Moreover, I use newly released dataset by Johnson (2015) to test my hypotheses. Also, I expand the literature on foreign policy influence and its conditions. In the final section of the paper I outline some of the possible policy implications.

### **1.1. Outline**

The paper proceeds as follows. In the next chapter I review the relevant literature on arms transfers. States can be classified as exporters and as importers according to their role in the arms market. I separately focus on each of them and reasons they export/import arms. Further, at the dyadic level I discuss how arms relations are used as a tool of influence and the way weapon shipments affect a recipient's behavior. Moreover, even though arms transfers were

extensively researched by scholars, they are rarely studied from the perspective of military capabilities weapons possess. This project aims to fill this gap.

In chapter 3 I introduce a bargaining model in which the level of cooperation between the supplier and the recipient is the result of latter's cost- benefit analysis. Two version of the model are considered. In the first model I treat states as unitary actors and expect that there is a positive relationship between recipients' cooperative behavior and the amount of military capabilities transferred. In the second version of the model I consider recipients' domestic regime type and expect that there will be a variation in the way states' cooperate.

In chapter 4 I introduce my empirical model and outline the findings from the model.

In chapter 5 I make final conclusions and discuss possible policy implications.

## **Chapter 2**

### **Arms transfers and their effect**

#### **2.1. Arms transfers**

Why do states export arms? Why do states import arms? How do weapon shipments affect recipients' behavior? These are the questions that define the starting point of my review. Reviewing the literature both on monadic and dyadic levels allows exploring states' process of decision-making related to arms transfers broadly and look at how often states' expectations match reality. Specifically, while on monadic level the literature mainly deals with the expectations and incentives that arms importers/exporters have during arms transfers, on dyadic level the actual effects of arms deliveries/procurement can be observed.

States export arms for economic as well as political reasons. Those states that deliver weapons for economic reasons have been called industrial suppliers (Sanjian 1991; SIPRI 1971; Smith, Humm, and Fontanel 1985). Industrial suppliers sell arms to receive economic profit and to sustain their domestic production of weapons. Weapons manufacturing industry is a costly enterprise which both requires substantial resources and time. Long development cycle of a final product and sales that are usually low in number make the industry very expensive to maintain (Smith, Humm, and Fontanel 1985). Consequently, industrial suppliers are mainly concerned with wellbeing of their domestic defense sectors rather than foreign policy goals.

In turn, there are two types of suppliers that deliver arms for political reason. They are called hegemonic and restrictive suppliers (Sanjian 1991). Hegemonic exporters use arms transfers for geopolitical purposes. They decide whether to sell arms or not depending on how well an arms sales deal serves their geopolitical goals such as decreasing rival's influence in a particular region, establishing good relations with strategically important state in the area etc. The USSR's and the United States' relations with India and Pakistan during the Cold War can be given as an example of such foreign policy behavior. Sanjian (1998, 97) found that "the superpowers

were indifferent to the effects of their arms supplies on the relationships between the importers”. The exporters were mainly concerned with the level of importers’ compliance to patrons’ demands, and the USSR and the US used arms transfers as a reward for such foreign policy cooperation. Conversely, if an importer tried to buy arms from third parties or from the opposing superpower, arms relations were used as a tool of punishment.

Restrictive suppliers act according to different set of goals. Their main objective is to contribute to world stability. Hence, they never deliver weapons to states that are engaged in militarized disputes. This makes them distinct from hegemonic exporters that can sell weapons to disputants if their geopolitical interests are involved.

However, since states can change their goals depending on political circumstances, this classification is not fixed and states can swap from one category to another. In addition, states can follow several patterns of behavior at the same time too. For example, even though France is regarded as an industrial supplier, its geopolitical goals are closely connected to its economic profits (Sanjian 1991). External military sales contribute to the development of domestic industry by providing additional financial resources. Consequently, arms exports create mechanisms that make France able to do research and develop new technologies even when there is a low demand for its products domestically. Stable and well-developed domestic defense production makes the state more competitive on commercial market. Moreover, by decreasing dependence on arms imports it enables the state to pursue its geopolitical goals more effectively.

The same can be argued about Russia. After the collapse of the Soviet Union, the Russian defense industry entered a stage of stagnation. In order to revive its domestic defense sector and strengthen its geopolitical position the Kremlin in 2000 established Rosoboroneksport (ROE) (Kassianova 2006). The main objective of ROE is to export domestically produced weapons and increase Russian share in the international arms market. This, consequently, has to give the

state an opportunity to sustain and develop the domestic production, and maximize Russia's political influence internationally (Blank 2007).

America also pursues several goals in its arms export policy. Specifically, these goals are related to maximizing influence, contributing to world stability and gaining economic profit. Gregory M. Kausner, Deputy Assistant Secretary of the Bureau of Political Military Affairs, maintains that "the influence that comes with an arms sale should not be underestimated", and that profits from arms sales have both political and economic dimensions for the United States (Department of State 2014). However, the state also sees arms transfers as a way to export own values. For instance, Blanton (2000, 2005) found that human rights records and democracy are significant determinants of whether a state will be eligible to receive American arms or not. Moreover, since domestic policy is connected to foreign policy (Bueno de Mesquita et al. 1999), and countries that respect human rights domestically are also less likely to exhibit conflictual behavior on the international level (Caprioli and Trumbore 2003), it can be argued that states might be motivated to improve their human right records in order to receive weapons. Thus, such arms export policy can contribute to world peace.

Why do states decide to procure arms? There are two ways for a state to improve its military capabilities when it perceives a threat (Morrow 1993). The first is by joining alliances. The second is by arming itself. Each of these strategies has its own benefits and pitfalls. Becoming a member of an alliance requires negotiations of conflicting interests and complying with rules which restrain the state's capability to maneuver. Moreover, there is also a risk that alliance partners would not honor their commitments. Despite all of these disadvantages, cooperation with others helps a state to improve its capabilities in a short period of time, whereas it will take longer if a state chooses arms buildups.

A state can acquire arms by developing them domestically, importing them or using these two channels (development and import) simultaneously. However, in any case arms acquisition



needs large amount of resources that are usually extracted from population by means of taxation or conscription.

Morrow (1993) acknowledges that states usually use a combination of both allying and arming instead of solely relying on one of them. However, the final decision of a state about which course to follow is defined by domestic costs and external influences. In a nutshell, a state weighs domestic and external factors to choose the most favorable option. For instance, when a state perceives a threat in the context of enduring rivalry it may decide to engage in an arms race (Diehl and Crescenzi 1998). Alternatively, when there is no way to outstrip an adversary in power, the state may decide to look for alliance partners (Walt 1985).

However, Pearson (1989) argues that besides strategic considerations such as deterrence of threat, a state's decision to purchase arms may be just a result of inertia. Consequently, the amount of arms which will be imported in subsequent years is defined by amount of arms that is acquired in previous years by the same actor. Moreover, Suchman and Eyre (1992) maintain that arms acquisition is a social phenomenon, and states expand their military arsenal just because it is a symbol of sovereignty.

How do arms relations affect the recipient's foreign policy? Foreign policy is a guideline which defines how a state is going to interact with other actors in the international system. Such political phenomena as interstate conflicts, coalitions, rivalries and international trade are considered to be its manifestations. One of the main objectives of foreign policy is to provide security of a country, which is essential to its further development and prosperity. But what is the role of arms in international diplomacy? How these two concepts complement and influence each other?

There are several types of arguments that aim to elucidate the impact of weapon imports on foreign policy of a recipient. One type of arguments states that arms increase the war-proneness of a recipient. Another argument states that arms sales conversely have pacifying effect

(Kinsella 1994, 1998; Sanjian 1999). According to the third type of arguments arms relations make recipients more susceptible to external influence from the side of exporter. For my project the latter argument is the most relevant.

Krause (1991) distinguishes three types of models that deal with promotion of exporter's foreign policy interests. They differ in the type of employed power and pursued goal (short term, medium term and long term). These models are labeled as bargaining, structural and hegemonic.

Under the bargaining power model patron state uses arms transfer relations to coerce the client state to change its political behavior in order to reach a specific goal of immediate importance (Krause 1991). Such application of power is directly visible to observers. This might be done by means of punishment or promised reward. However, application of this model poses some difficulties such as measurement of perceptions. More specifically, outcome of influence attempt largely depends on how client state perceives the credibility of threat/reward. Proceeding from this it can either comply or refuse to change its current policy.

In the structural model most of the behavior of a recipient is defined by its surrounding context (Krause 1991). For this reason a patron state by means of some indirect manipulation tries to alter features of the context in order to influence client's behavior. For instance, it can change the range of options that is available to a client. Alternatively, a patron state might make some of these options more or less costly. The structural model is suitable for the analysis of medium term goals. This means that it takes time until the effects of patron's manipulations become visible to an external observer. Similar to bargaining power model structural model has its own methodological challenges. Particularly, these difficulties stem from the fact that it is impossible to measure patron states intentions in order to define their medium term goals.

In the hegemonic power model a patron state tries to set rules of the game by influencing the whole range of concepts that are used by client state's statecraft and security policies (Krause

1991). For instance, patron might try to affect the way client defines the concept of security, how security policies are built and how threats are perceived and analyzed. Unlike previous two models, in this model a client state lacks autonomy in making decisions. Specifically, although client thinks of itself as a sovereign actor, in fact all its decisions are just the product of outside manipulations. Recipient cannot make independent decision about security issues, because its understanding of a security is imposed by a patron. Recipient cannot make objective analysis of external environment, because his perception of reality is also imposed by a patron. Such model is suitable for a realization of long term goals and hence might be difficult to detect for external observers.

Krause's (1991) models deal with the problem of influence in general, whereas I mainly focus on influence which is gained through arms transfers.

My project directly looks at the type of transferred weapons and links it to the outcome of the influence attempt, while previous research on the same topic was mainly concerned with the context of the influence attempt.

For instance, Sislin (1993, 42) maintains that "[t]he concept of influence ... focuses sufficiently on those components of the actors' decision-making computation to form a base from which to assess how the context of the influence attempt, by affecting those computations, affects the outcome." By context Sislin (1993) meant such factors as the type of sanction (positive or negative), domestic regime of a target, policy which is a subject to change (foreign, domestic), dependence of a recipient which is measured by amount of supplied arms etc. In turn, Wheelock (1978) in investigating the limits of leverage in the U.S. – Israel relations argues that supplier's relations with other actors involved in a political crisis might also play a role in defining an influence attempt's effectiveness.

Paul (1992) claims that it is presence of reverse influence on recipient's side which affects the outcome. For example, the Pakistani government was aware that it was an important

strategic actor for the U.S in the region with a capability to deter Soviet advancement. Thus, America's ability to impose its will was severely constrained. Moreover, a supplier state completely loses its leverage once a recipient finds an alternative supplier (Tal 2006). To reiterate, none of these authors investigated the impact of weapons' type on the outcome of influence attempt.

## **2.2. Resource supplies as channels of influence**

Arms can be delivered in two ways: weapons can be sold or they can be given to a state as a part of military aid (Johnson 2015). Since in both cases the states establish arms export relationships these channels can be successfully used by the supplier to influence the decision-making calculus of the recipient.

### **a. Trade**

Trade ties make states interdependent. Listed among Kantian variables of peace economically important trade increases the costs of militarized interstate disputes, and, hence, creates additional incentives for countries to settle their conflictual issues by peaceful means (Oneal and Russett 1999). More specifically, since states share dependency, when one of them tries to use this trade channel to influence the other, the latter can rely on reverse influence capability to neutralize the effect. Thus, neither of them can obtain advantage and coerce the other. However, if one of the actors contributes to trade relations more in comparison to the other participant, then the degree of reverse influence will not be enough to counterbalance the influence attempt.

Although most of the trade can be described in terms of "goods for money" model or bartering, in the case of arms different set of assessment principles are applied. The main reason for this is that "[military export's] impact upon international security far exceeds their economic value" (Keller and Nolan 1997, 123). Agencies within the government have control over what types of weapons can be sold and which of them are subjects to restriction (Levine et al. 1997;

Willardson 2013). Thus, in arms trade exporters are more likely to have larger influence capability than importers.

## **b. Foreign aid**

Morgenthau (1962) identifies six types of foreign aid: humanitarian, subsistence, military, bribery, prestige and aid for economic development. Although foreign aid can be considered as “the fulfillment of an obligation of the few rich nations toward the many poor ones”, there is evidence that such resource supplies are not driven solely by humanistic motives (Morgenthau 1962, 301). Bueno de Mesquita et al. (2009) argue that donors provide aid for political reasons and demand policy concessions in return.

For example, humanitarian and subsistence aids are supplied to countries that have suffered from natural disasters, or in which governments failed to provide a bare minimum of public services. Although these types of aid are non-political at their core, they can also be used for political purposes. For instance, knowing that a donor will supply financial aid, a recipient country’s leader may be interested in maintaining a low level of economic growth. This will allow the leader to engage in kleptocracy, and reserve the received aid money for his discretionary use. Such phenomenon is referred as “the Samaritan’s dilemma” (Buchanan 1975). When it comes to the supplier side, the leader of the donor state can use this weakness in order to make the recipient’s leader choose policies that are in line with supplier’s preferences.

Until the beginning of nineteenth century, governments used bribes as a way to purchase political favors from other governments. Bribes are used now too, but they are more likely to be concealed under the category of aid for economic development than transferred openly (Morgenthau 1962, 302). In turn, such disguise can make the original aid for economic development ineffective. The main reason is that it would be hard to distinguish between mere

bribery and aid. Moreover, economic aid requires effective control from the side of a donor which is hard to provide.

Prestige aid is also one way to cover governmental bribes. This type of aid does not facilitate any economic development in recipient country, but rather is used to create some symbolic objects that are associated with development and industrialization. As Morgenthau (1962, 303) puts it prestige aid can be used to build “an unprofitable or idle steel mill, the highway without traffic and leading nowhere, the airline operating with foreign personnel and at a loss but under the flag of the recipient country.”

In turn, military aid can be allocated for two reasons. In the first case military aid is a way to support allies. In the second case, military aid is given in exchange for policy concession. As it was mentioned before economic aid is given in return for policy concession as well, however what makes military aid distinct is the fact that not all donors possess domestic defense industry of a sufficient quality which makes them able to provide arms. Consequently, the donors that are able to provide arms should have more leverage over their recipients.

## **Chapter 3**

### **Bargaining Theory of Foreign Policy Cooperation**

Foreign policy adjustment is an indistinguishable part of every cooperation process (both formal and informal). Consequently, in order to theoretically model the strategic interaction between a supplier country and a recipient country I partially draw on bargaining theory of international cooperation (Fearon 1998). The theory is built on two main propositions. The first proposition states that regardless of the domain (e.g. arms control, trade, finances etc.) all cooperation processes share the same strategic structure and consists of two stages: bargaining and enforcement. During the first stage states negotiate and approve the terms of an agreement. In the second stage an agreement is implemented and states' compliance to the agreement is monitored.

What happens at the enforcement stage directly affects the way states bargain. According to the theory if a state expects that the agreement will be effectively enforced, it will bargain harder in a desire to conclude the agreement on the most favorable terms. As a result, the period of time required to make a deal will become longer. However, Fearon (1998, 289) also notes that according to the case studies of actual negotiations the states are more concerned with the problems of bargaining than with the issues of enforcement and monitoring, since most of the negotiations fail because participants encounter the problem of "deadlock". Moreover, there is also evidence that states in general tend to comply with the concluded agreements regardless of enforcement mechanisms (Downs et al. 1996). Consequently, the bargaining stage has significant importance and largely defines the success of cooperation as a whole.

Fearon's (1998) theory is mainly applicable for formal cooperation. However, states in order to coordinate their actions widely use informal cooperation as well (Lipson 1991). Since as my

dependent variable I use a broad measure of cooperation, I assume that regardless of the level of institutionalization and domain all cooperation processes have the same strategic structure.

Building on these assumptions and insights drawn from the bargaining model, I develop two different, but related, theoretical models. In the first model I treat states as unitary actors and see how the recipients' level of cooperation changes in response to transfers of different weapon types. In the second model I assume that states bargaining behavior depends on the type of domestic regime and that transfers of the same type of weapons should have different impact on different regimes. I employ such approach for the following reason.

Even though Waltz (1979) was criticized for arguing that states' are unitary actors and there is no link between their domestic and foreign policies (e.g. Legro and Moravcsik 1999), it is possible that *under some circumstances* states will behave as unitary actors. For instance, let us consider states' behavior during the conflict situations. Although there are differences in the way democracies and autocracies start a war, once they are involved in the conflict their behavior should be similar. Democracies might fight harder (Gibler 2012), but all states need weapons and use weapons to win the wars. Since during the war all parties understand that their main goal is to destroy as many enemy objects as possible, their calculations regarding what will make them victorious have to be the same. Consequently, regardless of the domestic regime all states should value weapons for their own sake.

However, it might be the case that some states are more susceptible to external influence because of their domestic structure. The second version of the model is developed to capture such variation.

In both versions during bargaining each actor makes decision on the basis of cost-benefit analysis. However, the difference is how the parameters of the theory are measured. In the "unitary actor" version of the model the benefits of cooperation and the costs of noncooperation are both measured by total military capabilities of transferred weapons. Particularly, if the



recipient state decides to cooperate and adjust its foreign policy the benefits of cooperation will be equal to the total amount of transferred military capabilities. In contrast, if the recipient decides not to cooperate, then the costs of noncooperation will be equal to the amount of military capabilities that were lost as the result of non-compliance.

In turn, in the “non-unitary actor” version of the model I assume that states’ cost-benefit analysis differs according to the domestic regime type. While benefits of cooperation are measured by the total amount of received military capabilities, the costs come from the domestic institutions. Consequently, a similar level of military capabilities may have different impact on recipients’ susceptibility to external influence. In this case the domestic regime type defines the threshold that should be passed in order to induce cooperation.

### **3.1. The “unitary actor” model**

There are two actors: Supplier and Recipient. Supplier pursues several goals that may be mutually complimentary. These goals might include gaining economic profit, contributing to world stability and increasing political influence (Sanjian 1991). Supplier associates arms transfers with influence and, consequently, expects that in return for arms deliveries recipient will make concessions in its foreign policy.

Arms relations between these two actors start when either Supplier provides arms for Recipient as military aid, or when Recipient purchases arms from Supplier (Johnson 2015). In the U.S. case since transfer of arms directly contributes to the ability of Recipient to wage wars, the decision to authorize the deal is made on a case-by-case basis (Willardson 2013). When costs exceed benefits Supplier rejects arms deal. This happens when increase in Recipient’s military capability threatens Supplier’s security. In turn, application gets approved when a deal is found to be lucrative. The deal is profitable when it strengthens Supplier’s position in the international system (political dimension), brings substantial amount of revenues (economic dimension), or meets both criteria. However, since political dimension comes first (Smith,

Humm, and Fontanel 1985), in every deal it is expected that Recipient will comply with certain demands of Supplier. These demands, for example, may be in the form of regulations for the use of weapons or in the form of foreign policy adjustments.

Even though according to Supplier's calculations Recipient should become more cooperative in its foreign policy, Recipient's desire to comply might depend on the type of transferred weapon. If we think about it as an input, different characteristics of weapons (e.g. type, level of military capabilities) should have various impacts on the output. Specifically, it can be argued that while analyzing the deal Recipient specifically focuses not on the financial value of a purchase, but on military capabilities that he gains from it. The reason for this is that while planning military operations it is capabilities of weapons and not their prices that are taken into account. For instance, in order to calculate the probability of destroying certain number of enemy targets, military planners consider the type of weapons at their disposal and their respective military capabilities (Lemus and David 1963). According to this information they further develop the optimal deployment scheme of weapons on the battlefield (Perkins 1961). Consequently, one of the factors that affect Recipient's desire to cooperate is military characteristics of delivered arms.

In order to further derive empirically testable hypotheses specific characteristics of weapons should be discussed. Although there are different categories of weapons (e.g. small arms, weapons of mass destruction, chemical weapons etc.), in this project I specifically explore the impact of major weapons systems on Recipient's behavior. Moreover, to measure the amount of military capabilities that were delivered during the arms transfer episode, I construct an index of power based on weapons' technical characteristics and the number of weapon systems that was transferred. Hence, the general proposition is as follows.

**Proposition: As the total amount of transferred military capabilities increases, the level of recipient's cooperation also increases.**

In the study I consider two types of major weapons which are land weapons and aircraft and rely on Johnson's (2015) dataset which provides information regarding military capabilities of major weapon systems. Aircraft are further divided into three as attack, support and transport aircraft according to their roles on the battlefield. Ships are not considered because of the data availability problems. Table 1 contains information about how specific sub-categories are classified.

All the sub-categories of land weapons included in the study have destructive capabilities. Air defense systems (ADS) are divided into two as Gun Air defense systems and Missile Air Defense Systems. Missile ADS are more sophisticated than Gun ADS because they can target enemy objects at a longer range. Consequently, this affects the level of trainings that Missile ADS require and the prices (Johnson 2015).

**Table 1: Sub-categories of Major Weapon Systems**

General categories of weapons	Sub-categories of weapons	
Land weapons	Air Defense Systems (ADS): Gun ADS, Missile ADS	
	Artillery: Towed and Self-Propelled	
	Offensive armored vehicles	
	Tanks	
Air weapons	Attack	Bomber Aircraft,
		Attack Aircraft,
		Combat Helicopters
	Support	Support Aircraft
		Support Helicopters
		Unmanned Aerial Vehicles <sup>1</sup>
	Transport	Transport Helicopters
		Transport Aircraft

The next sub-category is artillery. Artillery can be used both in interstate and intrastate conflicts. According to the transportation methods it is divided as Self-propelled artillery and

<sup>1</sup> All of the UAV models in the dataset are tactical. For this reason, I included drones in the subcategory of support aircraft.

Towed artillery. Self-propelled artillery in general is more sophisticated and more expensive than Towed artillery.

Offensive armored vehicles and tanks are considered in the separate categories because of the characteristics of weapons they carry. Tanks are armored with heavier weapons than offensive armored vehicles.

From the above stated features of land weapons it can be concluded that they mainly differ in the amount of armament they carry. Consequently, for this category I construct the index of power by using the amount of armament that each model of land weapon systems possess and by multiplying it with the number of ordered weapons. Hence, the first hypothesis is as follows.

***Hypothesis 1: As the amount of total armament that was delivered during arms transfer episode increases, the level of Recipient's cooperation also increases.***

In the aircraft category both fixed-wing and rotary-wing aircraft are included. According to their functions they are divided into three sub-categories such as attack, support and transport aircraft. I assume that for all aircraft the range that an aircraft can fly without refueling plays an important role in its ability to fulfill the primary function (e.g. attack, transporting weapons/troops). Moreover, since during single arms transfer episode an exporter delivers several aircraft I measure the overall amount of transferred military capabilities for the aircraft category by multiplying "Range" variable with the number of aircraft that was ordered. Hence, Hypothesis 2 is as follows.

***Hypothesis 2: As the total range that all delivered aircraft can fly without additional tanks increases, the level of Recipient's cooperation also increases.***

Attack aircraft increase Recipient's both offensive and defensive capabilities and provide him with an opportunity to conduct operations from the air. One of the features that define the destructive capability of an attack aircraft is its pylon weight which measures "maximum

weight of gun pods, missiles, rockets, and bombs carried in kilograms” (Johnson 2015, 11). Consequently, Hypothesis 3 is as follows.

***Hypothesis 3: As the total pylon weight that was delivered with attack aircraft increases, the level of Recipient’s cooperation also increases.***

Transport aircraft are responsible for delivering weapons and troops to the battlefield. Consequently, the recipient’s desire to cooperate should depend on the total amount of troops/weapons that he will be able to deliver by receiving these transport aircraft.

***Hypothesis 4: As the total number of troops that transferred transport aircraft can deliver increases, the level of Recipient’s cooperation also increases.***

Support aircraft are designed to provide electronic surveillance, airborne early warning, patrol, aerial refueling etc. In order to account for this I assume that newer models are more preferred by Recipient than older ones since they are equipped with better technology. For this category I use “Age” variable which measure “number of years the model has been in use at year of order” (Johnson 2015, 11). I do not multiply this variable with the number of ordered weapons because this variable already summarizes how modern particular model of weapon is and it is applicable for the arms shipment in general.

***Hypothesis 5: As the age of support aircraft increases, the level of Recipient’s cooperation decreases.***

### **3.2. The “non-unitary actor” model**

In this version of the theoretical model there are also two main actors: Supplier and Recipient. They have conflicting preferences regarding the deal. While Supplier wants to get policy concessions from Recipient in return for arms transfers, Recipient wants to acquire arms, but without changing its foreign policy. In the “unitary actor” version of the model it is assumed that there is no connection between a state’s domestic regime type and its foreign policy. This assumption is relaxed in the “non-unitary actor” model.

In general states can be classified as democracies and autocracies. One of the main differences between these regimes is the audience to whom a leader is accountable in order to remain in office. Moreover, this is also reflected in how flexible the leaders are in their policy-making. Because democratic leaders are accountable for a larger audience (Bueno de Mesquita et al. 2005) and should ensure popular support for their policies which makes their behavior more consistent, I expect that autocracies will be more susceptible to external influence than democracies.

All regime types can be analyzed based on the following three characteristics: accountability, flexibility and transparency (Mattes and Rodríguez 2014).

#### *Accountability*

All leaders are held accountable for their actions (Mattes and Rodríguez 2014). The only difference is how large that audience is. In the selectorate theory Bueno de Mesquita et al. (2005) argue that in every regime there is a group of people who constitute the winning coalition. The size of winning coalition differs across the regimes, but its role is the same everywhere. The support of winning coalition is crucial for leader's survival. While in democracies the size of winning coalition tends to be large, the autocracies are known for its smaller size. Accountability has an interesting impact on the leader. Particularly, it directly defines how flexible a leader can be in its foreign policy.

#### *Flexibility*

Foreign policy making requires support of domestic actors. While the number of domestic actors that are directly involved in the process of foreign policy crafting increases, a leader's flexibility decreases. This severely affects the degree of volatility in state's behavior. For this reason democracies are considered better alliance partners than autocracies (Leeds, Mattes, and Vogel 2009).

Moreover, there are evidences that because of such institutional constraints democracies are less susceptible to influence than others (Walt 2005). Alternatively, buying policy concessions from democracies might require paying higher price than making other regimes adjust their policies to donors' desires (Bueno de Mesquita and Smith 2007).

### *Transparency*

Transparency of the regime is another dimension that distinguishes states from one another. Mattes and Rodríguez (2014) measured transparency of autocratic regimes by considering how free press is within the state. They found that even within autocratic regimes there is a variation in the level of freedom they grant to media. Because of the differences between democratic and autocratic institutions there is a reason to believe that democracies should be more transparent than other states. Transparency contributes to how predictable a state is in its policy-making.

All these features affect how a state forms and adjusts its foreign policy. In democratic regimes leaders tend to have less flexibility in policy – making which consequently affects the overall policy volatility of a state. Because of domestic constraints, in contrast to autocracies, democracies cannot change their policies easily. This directly affects how susceptible a state will be to external influence. From this I derive the following hypothesis.

***Hypothesis 6: Non-democracies are more likely to exhibit cooperative behavior in response to arms transfers than democracies.***

## Chapter 4

### Empirical Analysis

#### 4.1. Primary data sources

Two datasets are used in this project. The first one provides the data on military capabilities of major weapon systems transferred between 1950 and 2010 (Johnson 2015). The second one measures the level of recipient's foreign policy cooperation in response to the U.S. military aid and covers the period between 1990 and 2004 (Sullivan, Tessman, and Li 2011). The final samples are obtained by merging these data sources.

##### *4.1.1. The data on military capabilities of major weapons systems transferred between 1950 and 2010*

Political consequences associated with arms transfers have more impact on exporter's decision-making process than potential economic benefits from arms sales (Keller and Nolan 1997). Domestic production of arms in itself was found to be economically unprofitable (Smith, Humm, and Fontanel 1985). The long process of R&D requires large financial and human resource investments. However, political independence and influence which is gained together with the status of arms exporting state was always tempting (e.g. Caverley and Kapstein 2012). Despite these benefits of being an arms exporter, most of the countries lack capabilities of developing arms domestically. Consequently, in the international system there are more arms importing states than arms exporting ones. Namely, according to Stockholm International Peace Research Institute (SIPRI), between 2010 and 2014 153 states (which constitute almost three – quarters of all the countries in the world) were importing major weapons systems (Wezeman and Wezeman 2015).

Weapons' intuitive association with power and influence led to the expectation that recipient states will be willing to adjust their foreign policies in return to weapon transfers. Traditional



datasets such as SIPRI arms transfer datasets or World Military expenditures and Arms transfers (WMEAT) dataset use weapons' financial value to estimate arms transaction's overall weight.

There is a ground to argue that such measurements are not accurate enough to analyze the impact of arms transfers on the international system in general and on importer states in particular (Johnson 2015).

When the exporter decides to supply arms, he transfers a certain amount of military capabilities to the importer. Consequently, it would be more accurate to evaluate the overall impact of arms transfers by directly measuring the technical characteristics of weapons. The recently released dataset by Johnson (2015) allows accounting for this fact. The author's dataset is based on SIPRI's Arms trade register. In the dataset SIPRI's four main categories of weapons – air defense systems, artillery, armored vehicles and aircraft- are reorganized into two categories such as land and air weapons. Land weapons contain six categories – gun and missile ADS, towed and self-propelled artillery, armored vehicles and tanks. Air weapons are classified into eight categories and include both aircraft and helicopters that provide support, transport troops/ weapons and possess offensive capabilities. Unmanned aerial vehicles are also included in this category. The data on military characteristics of these weapon systems are obtained from Jane's Information Group yearbooks.

The dataset is distinct from the previous datasets that also categorized arms according to their military capabilities in several ways. For example, Mullins' (1987) dataset is considered to be one of the oldest datasets of this type. The author classifies weapon systems according to their roles into thirteen categories and measures their armament and weight in order to account for the variation in the capabilities of weapon systems. However, the dataset does not provide information on such types of weapons as Air defense systems (ADS) and artillery (Johnson 2015). Craft's (2002) dataset, in turn, uses "weighted effectiveness indicator" to assess weapon's capabilities (Johnson 2015). However, the drawback of such approach is that it does

not allow accounting for the difference in weapons' types. Specifically, according to this indicator a certain type of aircraft can be evaluated as more effective than a certain type of tank, which makes weapons look homogenous. Johnson's (2015) classification is similar to the one used by Zarzecki (2002). However, while Zarzecki's (2002) data covers the period between 1960 and 1997, Johnson's (2015) data provides information for all the exporters and their arms transfers made between 1950 and 2010.

#### *4.1.2. The data on recipients' level of foreign policy cooperation*

The data on recipients' level of foreign policy adjustment is taken from the study by Sullivan, Tessman and Li (2011). Their dataset is based on 10 Million International Dyadic Events Dataset (King 2003; King and Lowe 2003) in which each observation represents a foreign policy action taken by a state in relation to other state and covers the time period from 1990 to 2004. The data is collected by a software called Reader which is developed by the Virtual Research Associates, Inc (Tools and Solutions - Virtual Research Associates, Inc. n.d.). Reuters News Briefings are used as a primary data source.

The software processes the articles' leads that effectively summarize the texts' main content and extract information on source actor, target actor and the type of action taken. These actions are further assigned a numerical code that classifies these events according to the typology called the Integrated Data of Events Analysis (IDEA). The IDEA codes are then mapped onto Goldstein's (1992) conflict-cooperation scale which constitute the dependent variable. The scale varies from -10 (Military attack) to 8.3 (Extended Military assistance). In general, between 1990 and 2004 184 states received American military aid. The data is organized as a panel dataset and contains 2586 dyad-years in total.

## **4.2. Samples**

After merging the datasets I obtain five separate samples. Two of them are for land and aircraft categories in general, while the remaining three categorize aircraft according to their

specific roles on the battlefield (support, transport and attack aircraft). The unit of analysis is an episode of arms transfer and the samples are structured as cross-sectional datasets.

#### *4.2.1. Land weapons*

The sample for land weapons is constructed by appending the data on Air defense systems (ADS), artillery, offensive armored vehicles and tanks.

Between 1950 and 2010 there were 546 transfers of ADS (both Gun and Missile) in total, as Table 2 shows. 158 of these transfers were made by the United States. Since the temporal domain of the project covers only the period between 1990 and 2004 the number of the U.S. ADS transfers drops to 33.

In total, there were 1559 transfers of artillery (both towed and self-propelled) between 1950 and 2010. The U.S. transferred 413 of them. In turn, for the period between 1990 and 2004 the data report 54 American artillery transfers.

**Table 2: Summary of Land Weapon Transfers**

<b>Type of land weapons</b>	<b>Transfers from all exporters (1950-2010)</b>	<b>Transfers from the U.S. only (1950-2010)</b>	<b>Transfers from the U.S. only (1990-2004)</b>	<b>Dyads formed by the U.S. (1990-2004)</b>
ADS	546	158	33	16
Artillery	1559	413	54	22
Offensive armored vehicles	1414	372	100	30
Tanks	755	193	40	18
Sample before collapsing the multiple transfers within the same year			<b>227 (199)</b>	
The final sample after collapsing the multiple transfers within the same year and merging with the data on recipients' level of foreign policy cooperation			<b>131</b>	

When it comes to offensive armored vehicles, between 1950 and 2010 there were 1414 transfers made in general. Within these transfers 372 are made by the United States. For the period between 1990 and 2010 the number of the U.S. transfers constitutes 100 transactions.

755 transfers of tanks are recorded for the period between 1950 and 2010 with 193 of them being arm deliveries from the U.S. From 1990 to 2004 the U.S. made 40 transfers.

By appending these separate datasets I get the sample with 277 observations in total. However, I drop 28 observations since these transfers were made to the unknown countries and to the U.N. As a result, the sample shrinks to 199 observations.

Moreover, there are cases when there were multiple arms transfers from the same exporter to the same importer made within the same year. I collapse these observations in order to get the single observation that summarizes the transactions made within that year. After merging the sample on land weapons with the data on recipients' level of cooperation I get the final sample with 131 observations.

#### *4.2.2 Aircraft*

##### *Attack aircraft*

In order to get the final sample for attack aircraft I append the datasets on attack aircraft, bomber aircraft and combat helicopters. As Table 3 shows, between 1950 and 2010 there were 1648 attack aircraft transfers in total. Transfers from the U.S. constituted approximately one-

**Table 3: Summary of Attack Aircraft Transfers**

<b>Type of attack aircraft</b>	<b>Transfers from all exporters (1950-2010)</b>	<b>Transfers from the U.S. only (1950-2010)</b>	<b>Transfers from the U.S. only (1990-2004)</b>	<b>Dyads formed by the U.S. (1990-2004)</b>
Attack aircraft	1648	502	78	31
Bomber aircraft	163	56	1	1
Combat helicopter	180	65	38	18
Sample before collapsing the multiple transfers within the same year			<b>117</b>	
The final sample after collapsing the multiple transfers within the same year and merging with the data on recipients' level of foreign policy cooperation			<b>98</b>	

third of all transfers with 78 of them being made between 1990 and 2004.

In turn, 163 of bomber aircraft transfers were made between 1950 and 2010. The U.S. accounted for 56 of them. However, between 1990 and 2004 there was only 1 bomber aircraft transfer made by the United States.

For combat helicopter the number of transfers for the period from 1950 to 2010 constitutes 180 with 65 transactions being made by the U.S. Between 1990 and 2004 the U.S. made 38 transfers of bomber aircraft to 18 states.

By appending these three datasets I get the sample with 117 observations. After collapsing the multiple transfers within the same year into single observation and merging the sample with the data on recipients' behavior I get the dataset on attack aircraft with 98 observations.

#### *Transport aircraft*

In the transport aircraft category I append data on the transfers of transport aircraft and transport helicopters.

There were 2322 transfers of transport aircraft in total between 1950 and 2010. Approximately half of them were made by the United States. Between 1990 and 2004 the U.S. made 142 transfers of transport aircraft to 60 states.

**Table 4: Summary of Transport Aircraft Transfers**

<b>Type of transport aircraft</b>	<b>Transfers from all exporters (1950-2010)</b>	<b>Transfers from the U.S. only (1950-2010)</b>	<b>Transfers from the U.S. only (1990-2004)</b>	<b>Dyads formed by the U.S. (1990-2004)</b>
Transport aircraft	2322	1095	142	60
Transport helicopter	1953	815	161	57
Sample before collapsing the multiple transfers within the same year			<b>303</b>	
The final sample after collapsing the multiple transfers within the same year and merging with the data on recipients' level of foreign policy cooperation			<b>233</b>	

There were 1953 transfers of transport helicopters between 1950 and 2010 with the U.S. making 815 of them. Between 1990 and 2004 161 transfers were made by the U.S.

Appending these datasets gives me a sample with all the U.S. transfers of transport helicopters between 1990 and 2004. The number of observations in the sample is 303. After collapsing the multiple transfers within the same year into single observation and merging the sample with the data on recipients' level of foreign policy cooperation I obtain the final sample with 233 observations.

#### *Support aircraft*

For the category of support aircraft I append the data on support aircraft, support helicopters and Unmanned Aerial Vehicles (UAV).

There were 370 transfers of support aircraft between 1950 and 2010 with 235 of them made by the United States. The number of the U.S. support aircraft transfers constitutes 57 for the period between 1990 and 2004.

**Table 5: Summary of Support Aircraft Transfers**

<b>Type of support aircraft</b>	<b>Transfers from all exporters (1950-2010)</b>	<b>Transfers from the U.S. only (1950-2010)</b>	<b>Transfers from the U.S. only (1990-2004)</b>	<b>Dyads formed by the U.S. (1990-2004)</b>
Support aircraft	370	235	57	23
Support helicopters	164	53	16	10
UAV	100	20	6	4
Sample before collapsing the multiple transfers within the same year			<b>79</b>	
The final sample after collapsing the multiple transfers within the same year and merging with the data on recipients' level of foreign policy cooperation			<b>59</b>	

Between 1950 and 2010 in total there were 164 support helicopter transfers with 53 of them made by the United States. For the period between 1990 and 2004 the U.S. made 16 deliveries of support helicopters. In turn, 100 UAV transfers were made between 1950 and 2010 in total. The U.S. accounts for 20 of them. Between 1990 and 2004 the U.S. made 6 transfers of support UAVs.

Appending these datasets yields a sample with 79 observations. After collapsing multiple transfers into single observation and merging with the dataset on the recipients' behavior I get the final sample with 59 observations.

In order to get the sample for the aircraft category in general, I append attack, support and transport aircraft categories and collapse multiple transfers into single observation. After merging the obtained sample with the data on dependent variable I obtain the sample with 322 observations.

### 4.3. Statistical model

The choice of the model is justified by the type of dependent variable and structure of the datasets. Specifically, in this project the dependent variable is continuous and represents a degree of recipient's cooperation. In turn, the samples are structured as cross-sectional datasets. Hence, linear regression is found to be the most appropriate to test the derived hypotheses.

In order to investigate the relationship between weapons' military capabilities and the level of foreign policy cooperation, I estimate the following equations.

$$(1) \text{Cooperation}_i = \alpha + \beta_1 \text{Total transferred military capabilities} + \beta_2 X_i + \varepsilon_i$$

$$(2) \text{Cooperation}_i = \alpha + \beta_1 \text{Total transferred military capabilities} + \beta_2 \text{Regime type} + \beta_3 \text{Total transferred military capabilities} \times \text{Regime type} + \beta_4 X_i + \varepsilon_i$$

In the first equation I expect that for Hypotheses 1 through 4 the betas of "Total transferred military capabilities" variable will be positive since I suppose that the recipients' willingness to cooperate would increase as the total amount of transferred military capabilities increases.

However, I anticipate negative sign for the beta in Hypothesis 5 since I assume that as the model of a weapon becomes older, the recipient's willingness to cooperate would decrease.

The second equation is constructed to test Hypothesis 6 which is derived from the “non-unitary actor” version of the theoretical model. Hypothesis 6 predicts positive relationship between military capabilities and recipients' foreign policy adjustments. However, it is expected that this relationship will be conditional upon the recipient's domestic regime type. Specifically, it is anticipated that non-democracies will show higher level of cooperation than democracies which in the statistical results should be expressed by the negative sign of the interaction term. Rearranging the terms of the second equation yields the following equation.

$$\text{Cooperation}_i = \alpha + (\beta_1 + \beta_3 \text{ Regime type}) \text{ Total transferred military capabilities} + \beta_2 \text{ Regime type} + \beta_4 X_i + e_i$$

While in the model without conditional relationship the effect of the main independent variable on the dependent variable is expressed by  $\beta_1$ , in the model with conditional relationship the coefficient of the main independent variable is expressed by  $\beta_1 + \beta_3 \text{ Regime type}$ . Since I anticipate that it will be harder to buy policy concessions from democracies, the overall value of dependent variable's coefficient should decrease when “Democracy” variable is 1 which means that the sign of  $\beta_3$  should be negative.

#### 4.4. Variables

##### **Dependent variable: Foreign policy cooperation**

The dependent variable is the measure of how cooperative was a recipient during the given year. Recipient's each action is machine-coded on a day-by-day basis according to the Reuters News Briefings. Further, monthly score of conflict and cooperation is assigned to each dyad by Virtual Research Associate (VRA). Monthly score is the aggregation of a daily Goldstein score. The final values of the dependent variable are obtained by averaging monthly scores of a dyad (Sullivan, Tessman, and Li 2011).



## Explanatory variables: Total military capabilities of transferred weapon systems

### Land weapons

Military capabilities of land weapons are measured by the amount of armament that a weapon system carries. The caliber of weapons' shell/projectile represents a system's firepower and is given in millimeters. Using this measure of fire power I construct the total power index by multiplying armament with the number of ordered weapons.

Summary statistics for land weapons are provided in the table below.

**Table 6: Summary Statistics for Land Weapons**

VARIABLES	(1) N	(2) Mean	(3) Sd	(4) Min	(5) Max	(6) Missing values
Cooperation	131	4.793893	9.724325	-58.40833	58.225	0
Armament* Number of ordered weapons	105	11424.29	22107.09	12.7	158867.3	26
CINC score	131	.0094457	.0117795	.0002838	.0594964	0
Preference similarity	131	.4414558	.1929607	.09899	.965096	0
Democracy	131	.4045802	.4926947	0	1	0

### Aircraft

Several variables are used to measure military capabilities of aircraft. The first one measures the distance that an aircraft can fly without refueling and given in kilometers. This variable is used for aircraft category in general.

The second variable measures the pylon weight of attack aircraft and captures the variation in firepower. The third variable is used to measure the number of troops that transport aircraft

can deliver. The fourth variable measures the age of support aircraft and supposed to represent the level of equipment's sophistication. All these variables, except the one that measures the age of a weapon, are multiplied by the number of weapons the importer ordered. I do not multiply "Age" variable, because it already represent how modern a particular model is. Moreover, multiplying the "Age" variable with the number of ordered weapons might also be misleading. For instance, State A can order 10 units of a new weapon system that was designed only a year ago, while State B can order 1 unit of a weapon that was designed ten years ago. By multiplying "Age" variable with the number of ordered weapons I get "10" for both observations. Consequently, in the datasets it will look like both states received the aircraft with the same level of sophistication, while in fact the weapons that are received by State A are more likely to be equipped with the latest version of software or technology than the weapons delivered to State B.

Summary statistics for all aircraft are provided below.

**Table 7: Summary Statistics for All Aircraft**

VARIABLES	(1) N	(2) Mean	(3) Sd	(4) Min	(5) Max	(6) Missing values
Cooperation	322	4.067547	8.153627	-58.40833	58.225	0
Range* Number of ordered weapons	290	38918.1	71777.43	511	498576	33
CINC score	322	.0089163	.014673	.0000175	.147196 2	0
Preference similarity	321	.5404066	.2030362	.09899	.965096	1
Democracy	321	.4392523	.4970709	0	1	1

Summary statistics for attack aircraft are provided in Table 8.

**Table 8: Summary Statistics for Attack Aircraft**

VARIABLES	(1) N	(2) Mean	(3) Sd	(4) Min	(5) Max	(6) Missing values
Cooperation	98	3.764711	4.51673	-12.34167	21.50834	0
Pylon weight* Number of ordered weapons	68	490176.1	1222215	3264	8000136	30
CINC score	98	.0075236	.0075602	.0003838	.0515532	0
Preference similarity	98	.495582	.1918509	.09899	.814617	0
Democracy	98	.4693878	.5016279	0	1	0

Summary statistics for transport aircraft are provided in Table 9.

**Table 9: Summary Statistics for Transport Aircraft**

VARIABLES	(1) N	(2) Mean	(3) Sd	(4) Min	(5) Max	(6) Missing values
Cooperation	233	4.153648	8.967133	-58.40833	58.225	0
Troops* Number of ordered weapons	208	305.7187	597.6725	4	5814	25
CINC score	233	.0090521	.0160963	.0000175	.1471962	0
Preference similarity	232	.5613773	.2046911	.09899	.964349	1
Democracy	232	.4181034	.4943138	0	1	1

Summary statistics for support aircraft are provided in Table 10.

**Table 10: Summary Statistics for Support Aircraft**

VARIABLES	(1) N	(2) Mean	(3) Sd	(4) Min	(5) Max	(6) Missing values
Cooperation	59	7.126554	11.90892	-.0666667	58.225	0
Age	40	16.65	13.15938	0	41	19
CINC score	59	.0135992	.0155125	.0008555	.059807	0
Preference similarity	59	.5408867	.1949703	.09899	.965096	0
Democracy	59	.5084746	.5042195	0	1	0

### **Democracy**

In order to test the hypothesis which is derived from the second version of theoretical model the Polity IV dataset is used (Beardsley and Gleditsch 2003). A dummy variable is created to distinguish democratic states from non-democratic ones. The states that have a score higher than 8 are coded as democracies, other states are coded as non-democracies.

### **Control variables**

#### **Composite Index of National Capabilities (CINC)**

The CINC score is based on six indicators such as military expenditure, military personnel, energy consumption, iron and steel production, urban population and total population. The score is supposed to evaluate state's share of power in the international system (Singer 1988; Singer, Bremer, and Stuckey 1972). According to Bueno de Mesquita and Smith (2007) more resources make a state less susceptible to foreign influence.

### **Preference similarity**

This variable is taken from Sullivan et al. (2011) and helps to isolate the independent impact of transferred weapons' military capabilities on recipients' foreign policy. It controls for the fact that some states may already have similar preferences with the U.S. because of cultural, economic or geographic factors. The variable ranges from 0 to 1.0. As the S score increases, the similarity between the states' alliance portfolios also increases (Signorino and Ritter 1999).

### **4.5. Results**

Tables 11 and 12 report the results of statistical analysis. Hypotheses from 1 to 5 are derived from the "unitary-actor" version of the theoretical model. Statistical analysis yields mixed results. For instance, in Hypothesis 1 at first sight it looks like the coefficient of the main explanatory variable ("Armament \* Number of ordered weapons") shows positive relationship between the recipients' cooperation and military capabilities of transferred weapons. However, besides being statistically insignificant, this variable's coefficient is very close to 0, which actually indicates that there is no relationship between recipients' behavior and transferred land weapons' firepower. The same is applicable to Hypothesis 3. The coefficient of the variable "Pylon weight\*Number of ordered weapons" is positive, but very close to zero.

Moreover, Hypothesis 5 predicts negative relationship between the dependent and the independent variables. Specifically, I assume that as the age of the model increases, its level of sophistication and competitiveness decreases. Consequently, the recipient should be less likely to cooperate in response to arms provision. However, contrary to expectations the coefficient of "Age" variable is positive though not statistically significant.

In turn, statistical tests of Hypotheses 2 and 4 provide some evidence that there is a link between recipients' willingness to exhibit cooperative behavior in its foreign policy and the type of provided weapons. "Range\*Number of ordered weapons" variable in Hypothesis 2 is positive and statistically significant at the 0.05 level. In turn, "Troops\*Number of ordered

weapons” variable which measures the overall number of troops that a state can transport by receiving the aircraft is positive and statistically significant at the 0.1 level. The substantive effects of these variables on the dependent variable are reported in Table 13.

When with arms transfers a state gets a capability to fly the aircraft at range of 51 100 km without refueling, the recipient’s predicted level of cooperation is 3.39589. When this indicator is at its maximum which in the dataset equals to 49857600 km, then recipient’s level of cooperation increases by 7 points and constitutes 10.04979. This change makes almost one standard deviation increase in recipients’ level of foreign policy cooperation. Hence, it can be concluded that the impact of weapons’ military capabilities on recipients’ behavior is substantial.

We can observe the same behavioral pattern for transport aircraft transfers. When an aircraft with capacity to transport 4 soldiers is transferred, the predicted level of recipients’ cooperation is 3.233877. However, when a state acquires a capacity to deliver 5814 soldiers this indicator increases to 13.0118. For this category of weapons the increase is even more than one standard deviation. While one standard deviation equals to roughly 8 points, the change in recipients’ level of foreign policy cooperation is almost 10 points. Such positive change in recipients’ behavior also suggests that technical characteristics play important role in defining whether the recipient would become more cooperative or not.

When it comes to control variables, CINC score shows strong statistically significant impact on the dependent variable. Although it was expected that the relationship between CINC score and the dependent variable will be negative, the results demonstrate the opposite trend. In all the samples CINC score is positively associated with recipients’ cooperation. These results are statistically significant at the 0.01 level. Only in the category of “Attack aircraft” CINC score becomes statistically insignificant. However, the direction of the relationship remains the same.

Moreover, controlling for preference similarity also reveals some interesting links. Theoretically preference similarity has to have positive impact on recipients' decision to cooperate. However, in almost all of the samples preference similarity is associated with uncooperative behavior on the side of the recipient, though the results are statistically significant only in the attack and support aircraft categories.

Hypotheses from 6a to 6e are derived from the “non-unitary actor” version of theoretical model. These hypotheses anticipate a conditional relationship between the recipients' willingness to cooperate, arms transfers and recipients' domestic regime type. In such models the interaction term crucially changes the way the results are interpreted. In general, it can be observed that the predictions of theoretical model are not supported statistically. As it was mentioned before it is expected that the coefficients of the interaction terms will be negative. However, except for Hypothesis 6a and 6e, all the interaction terms are positive and statistically significant.

**Table 11: Regression Results. The Impact of the US Arms Transfers on the Recipient States' Foreign Policy Cooperation Level**

VARIABLES	Land weapons H1	Aircraft H2	Attack aircraft H3	Transport aircraft H4	Support aircraft H5
CINC	517.0*** (69.44)	309.1*** (26.35)	94.49 (79.67)	269.8*** (32.15)	707.2*** (52.95)
Preference similarity	-3.025 (3.830)	-1.902 (1.907)	-9.437*** (2.590)	0.0674 (2.428)	-10.65** (4.958)
Capability (Armament)	1.21e-05 (3.38e-05)				
Capability (Range)		1.34e-05** (5.50e-06)			
Capability (Pylon weight)			5.43e-07 (4.21e-07)		
Capability (Troops)				0.00168* (0.000859)	
Age					0.0267 (0.0751)
Constant	0.899 (1.875)	1.694 (1.171)	7.499*** (1.598)	0.860 (1.519)	2.417 (2.806)
Observations	105	288	68	207	40
R-squared	0.364	0.352	0.252	0.295	0.841

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1



**Table 12: The Impact of the US Arms Transfers on the Recipient States' Foreign Policy Cooperation Level (Conditional Relationship)**

VARIABLES	Land weapons H6a	All aircraft H6b	Attack aircraft H6c	Transport aircraft H6d	Support aircraft H6e
CINC	510.4*** (69.16)	297.3*** (25.51)	146.2** (72.22)	252.8*** (31.09)	678.7*** (53.48)
Democracy	4.336** (1.884)	2.771*** (0.882)	0.941 (1.018)	2.968*** (1.110)	5.924* (2.998)
Preference similarity	-7.886* (4.497)	-3.843** (1.881)	-11.09*** (2.485)	-1.608 (2.345)	-11.75** (5.009)
Capability (Armament)	3.33e-05 (5.34e-05)				
Dem* Cap. (Armament)	-3.82e-05 (6.84e-05)				
Capability (Range)		1.78e-06 (7.39e-06)			
Dem* Cap. (Range)		1.94e-05* (1.05e-05)			
Capability (Pylon weight)			-1.54e-07 (4.20e-07)		
Dem* Cap. (Pylon weight)			3.20e-06*** (8.95e-07)		
Capability (Troops)				-0.000334 (0.00117)	
Dem* Cap. (Troops)				0.00365** (0.00162)	
Age					0.0880 (0.0984)
Dem* Age					-0.138 (0.145)

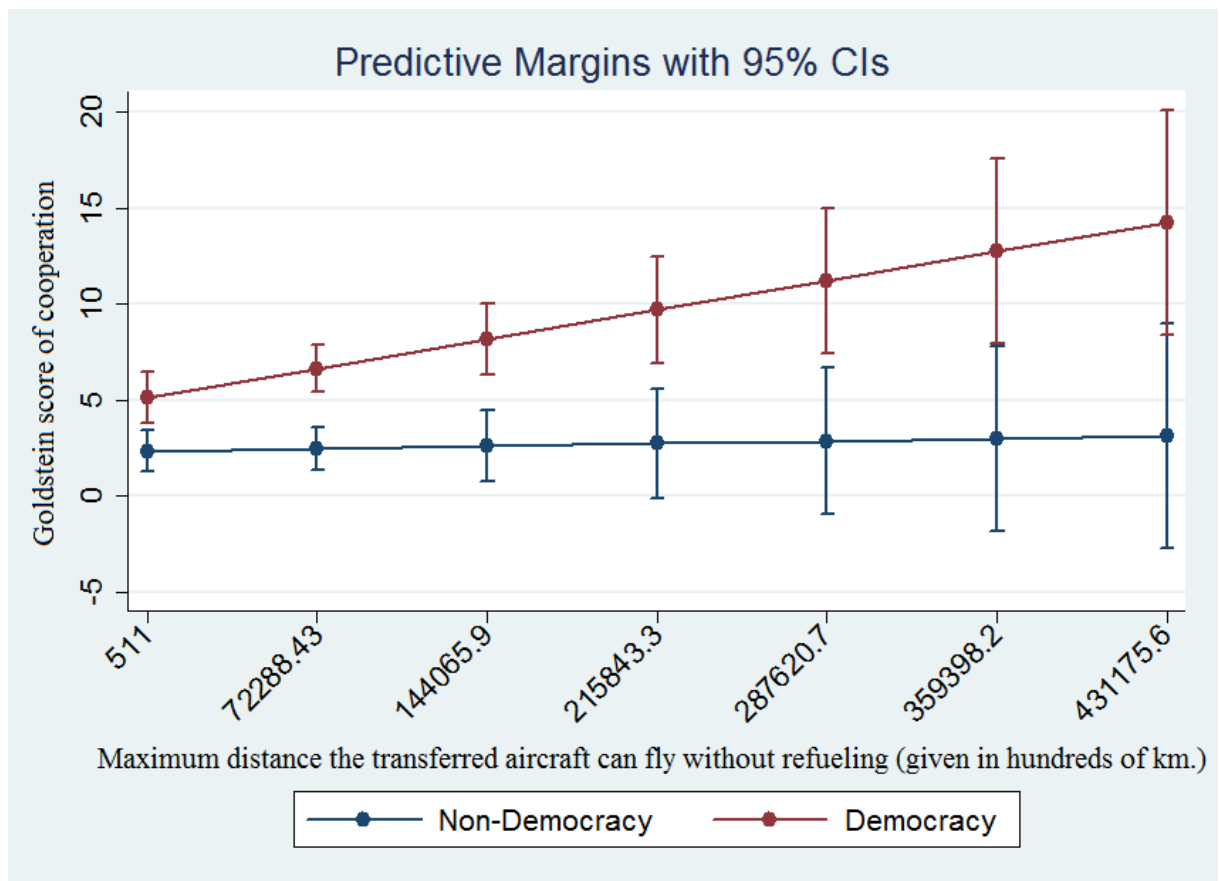
Constant	1.356 (1.995)	1.800 (1.157)	7.236*** (1.419)	0.983 (1.507)	0.635 (2.818)
Observations	105	288	68	207	40
R-squared	0.396	0.403	0.431	0.364	0.861
Standard errors in parentheses					
*** p<0.01, ** p<0.05, * p<0.1					

**Table 13: Substantive Effects of Transferred Military Capabilities on Recipients' Level of Cooperation**

VARIABLES	Min	Y'	Max	Y'	Mean	Y'	+1SD	Y'
Range	511	3.39589	498576	10.04979	38918.1	3.912413	110695,5	4.867901
Troops	4	3.233877	5814	13.0118	305.7187	3.744042	903.3912	4.747505

For instance, in Hypothesis 6b the interaction term is positive and statistically significant at the 0.1 level. This means that contrary to theoretical expectations democracies are more likely to cooperate in response to aircraft transfers than non-democracies. As it can be seen from Figure 1, the change from minimum range to maximum increases democracies' level of cooperation by almost 10 points. This is more than one standard deviation increase. In turn, for non-democracies it seems like the level of cooperation remains the same even when the amount of transferred military capabilities is increased.

**Figure 1: Regime Type and Aircraft Transfers**



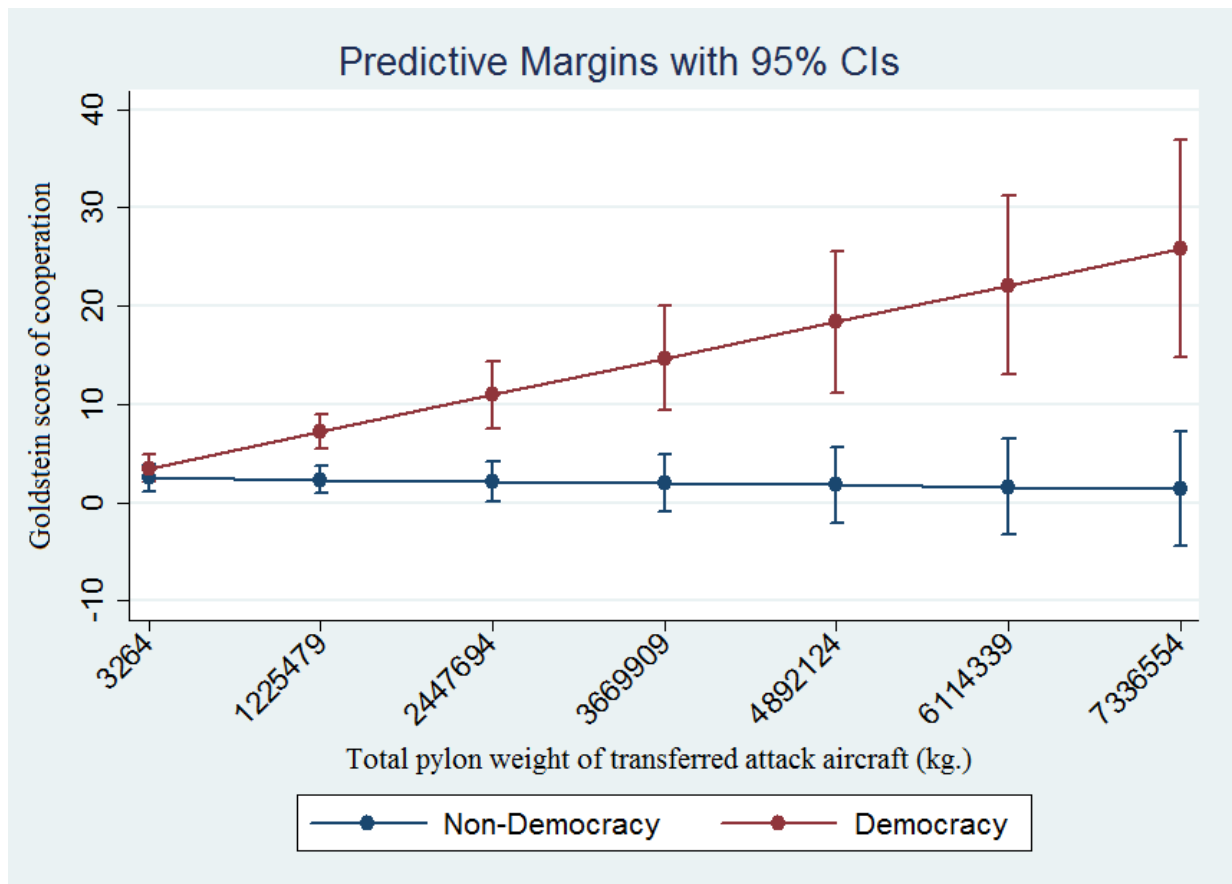
The same is applicable to Hypothesis 6c. The coefficient of interaction term is positive and statistically significant at the 0.01 level. For the same amount of offensive capability, which is measured by the total pylon weight of transferred attack aircraft, democracies tend to show higher level of cooperation than non-democracies. Figure 2 shows that although both

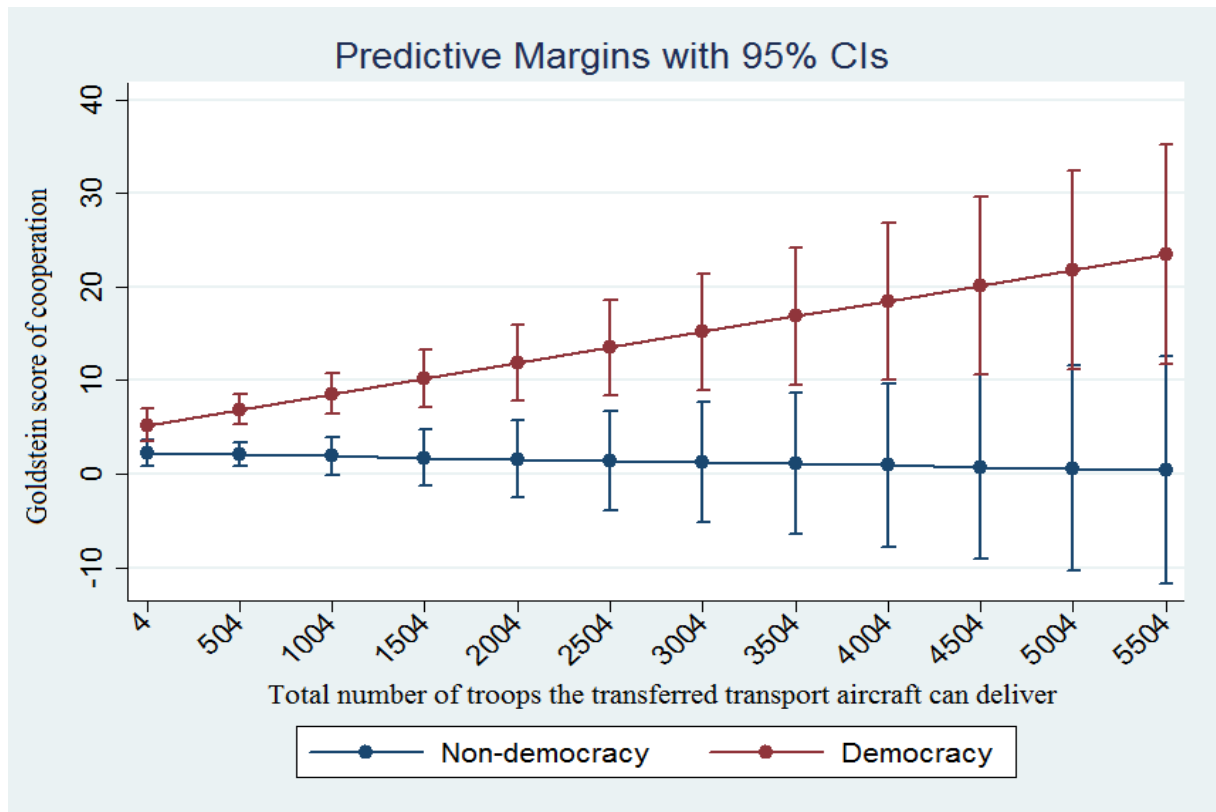
autocracies and democracies exhibit the same level of cooperation for the minimum value of pylon weight, democracies tend to show more substantial change in their behavior as the amount of transferred military capabilities increases. In this sample the standard deviation of the dependent variable is 4.5. Hence, a change from roughly 3 points to approximately 27 points represents a substantial effect of weapons' military capabilities.

For transport aircraft category the same behavioral pattern is observed. The level of foreign policy cooperation exhibited by democracies is higher than the level of cooperation shown by non-democratic states. The coefficient is statistically significant at the 0.05 level. As it is shown in Figure 3, the level of democracies' cooperation increases from 5 to 22. Since the standard deviation for this category is approximately 8 points, it can be argued that two standard deviations increase in cooperativeness can be interpreted as a substantial change.

However, for land weapons and support aircraft the results show different trends.

**Figure 2: Regime Type and Attack Aircraft Transfers**



**Figure 3: Regime Type and Transport Aircraft Transfers**

The tests of Hypothesis 6a produce statistical results that are in theoretically expected direction: in the Land weapons category as the level of transferred military capabilities increases, democracies become more uncooperative in their foreign policy behavior. However, the coefficients are not statistically significant.

Tests of Hypothesis 6e yield counterintuitive results for non-democratic state. According to statistical outputs, it looks like non-democracies tend to become more cooperative as weapons' level of sophistication decreases. In turn, the behavior of democratic states fits the theoretical expectations.

#### 4.6. Discussion

The results of empirical analysis provide mixed support for the theoretical arguments of the project. According to the results it can be argued that the propositions of “unitary actor” version of the theory are more accurate than the predictions of “non-unitary actor” model. The hypotheses are supported for aircraft category in general and for a sub-category of transport

aircraft which means that there are some evidence the recipients *do consider* the level of transferred weapons' military capabilities in their calculus about whether to adjust their foreign policy or not. However, for land weapons, attack aircraft and support aircraft the statistical analysis produce contradictory results.

In turn, the expectations of “non-unitary actor” model do not find any statistical support. While the theoretical model predicts that democracies will be less susceptible to influence than non-democracies, statistical results show the signs of opposite behavioral patterns. However, if we think about arms transfers as an agreement between exporter and importer where exporter supplies arms and importer guarantees to be more cooperative in response, then these findings corroborate the notion that democracies are better at complying with agreements than non-democracies (Simmons 1998). Consequently, even though democracies tend to be less susceptible to external influence, the donors can influence democracies through concluding both formal and informal agreements with them.

It is noteworthy that these results should be interpreted with caution. The first reason is data limitation. The project uses two data sources. The data for the main explanatory variable which is military capabilities of transferred weapons covers the temporal domain between 1950 and 2010. In turn, the source that provides the data on the dependent variable (the level of recipients' foreign policy cooperation) is for the period between 1990 and 2004. Consequently, the temporal overlap of the datasets is much smaller than it potentially could be. The extension of Sullivan et al. (2011) data for the Cold War period could significantly improve the results of empirical analysis. Moreover, in the study only arms transfers from the U.S. are considered. Increasing the list of suppliers also can positively contribute to the accuracy of inferences. These two factors crucially affect the sample sizes of the project. In addition, military capabilities are measured in a very simple and straightforward way. In order to further improve the study more comprehensive measure should be developed.

However, it is still possible to argue that the results of the project are promising. The data for the level of recipients' cooperation is "noisy" and biased toward detecting no relationship between the dependent variable and the main independent variable (Sullivan et al. 2011). Hence, the conducted empirical analysis represented a "tough" test for the hypotheses.

## Chapter 5

### Conclusion and Policy Implications

A state is defined as “a human community that (successfully) claims *the monopoly of the legitimate use of physical force* within a given territory” (Weber 1968, 1). Even though other actors inside or outside the state (e.g. terrorists, criminal groups or citizens) may also have an ability to use brutal force, the key word in this definition is “legitimacy”. Only the state has a “right” to use power in order to protect its citizens from threats of any nature (Tilly 1985). War-making has also directly contributed to the emergence and formation of modern states in general (Tilly 1992). From the moment governments realized that the outcome of a war could define whether a state continues its existence or perishes, the ability to fight effective wars became crucial and whole internal structure of a state was organized to strengthen this capability (e.g. tax system, industry).

There is a natural link between a conventional war and weapons. Arms play an important role in defining the results of militarized conflicts. Consequently, in order to preserve its status of a sovereign state an actor has to be well-armed. Proceeding from this motivation of states to acquire arms, there is no wonder that arms transfers were strongly associated with influence. However, the previous research on the influence of arms measured the importance of provided weapons indirectly. Such traditional data sources as the SIPRI Trend Indicator Values (TIV) or the WMEAT use financial data to evaluate the significance of transferred arms. Moreover, the measure of importer’s dependence is also usually constructed by using the economic value of delivered arms. Consequently, the way arms transfers are measured in these studies does not allow directly assessing the amount of transferred military capabilities, and estimating their effect on recipient’s behavior.



Political impact of arms transfers far exceeds their economic value (Keller and Nolan 1997). Moreover, even though some exporters may provide arms purely for economic benefits in order to get resources for sustaining their domestic arms production industry (Sanjian 1991; SIPRI 1971), their motivations are not fixed. Hence, those states that are currently industrial suppliers can turn into restrictive suppliers or hegemonic exporters as, for instance, their geopolitical goals change. Moreover, Smith et al. (1985) maintain that mainly political considerations are more important for supplier states than economic benefits. Obviously, there is always a risk that preferences and interests would shift and those states that are allies today could turn into foes. As a result, the suppliers could face a situation when an adversary uses suppliers' weapons against them (Keller and Nolan 1997).

It is difficult to quantify the amount of transferred military capabilities by using financial data. Large amount of small arms can cost the same as several units of land weapons, for instance. However, while latter can significantly contribute to the military strength of a state during intrastate war, the impact of former category of arms will be smaller. Consequently, measuring arms transfers by their financial values could be misleading (Johnson 2015).

In order to fill this gap I investigate the impact of transferred weapons' military capabilities on the level of recipients' foreign policy adjustments. Using bargaining theory I develop two versions of the theoretical model. In general, the theoretical models follow the logic of Fearon's (1998) bargaining theory of foreign policy cooperation. Fearon's (1998) theory is built on the assumption that all cooperation processes regardless of their domain (e.g. finances, arms control etc.) have the same strategic structure. However, his theory is more suitable for formal agreements than for informal. Consequently, since I use a broad measure of cooperation that includes both formal and informal acts of cooperation as my dependent variable, I draw on his theory only partially. Moreover, while in his theory it is assumed that all formal cooperation processes have the same strategic structure, I extend this assumption to informal cooperation as

well. Specifically, I assume that regardless of the level of institutionalization and domain all cooperation processes have the same structure.

Two version of the theoretical model labeled as “unitary actor model” and “non-unitary actor model” differ in the way the parameters are measured. In “unitary actor” version of the model both costs of non-cooperation and benefits of cooperation are measured by the total amount of military capabilities that is transferred. If a state decides to adjust its foreign policy it will receive a certain amount of military capabilities. In turn, if a state decides to maintain its status quo, then the costs of non-cooperation will be again equal to the amount of military capabilities that could be transferred if a state made more cooperative decision. This version of the theory rests on the assumption that under some circumstance such as militarized conflicts all states behave the same regardless of their domestic regime type.

This assumption is relaxed in the “non-unitary actor” version of the theory. While the benefits of cooperation are measured by the military capabilities of transferred weapons, the costs depend on the recipients’ regime type. Hence, it is expected that different regimes will exhibit different level of cooperation in response to the transfers of the same type of weapon. Particularly, the hypothesis is that non-democratic regimes are more susceptible to external influence than democratic regimes.

According to the results of empirical analysis the “unitary actor” version of the theory provides more accurate predictions than the second version of the model. Two out of five hypothesis of the model were supported statistically. In turn, the statistical analysis of the “non-unitary actor” version of the model shows that actually democracies are more cooperative than non-democratic regimes. However, it could be the case that democracies show higher level of cooperation than non-democracies not because they are susceptible to external influence, but because they are better at complying with agreements (Simmons 1998). Consequently, even though arms are used as influence tools by exporters, democracies might perceive the

transaction of arms as the fact of contract conclusion and thus show higher degree of foreign policy cooperation.

However, because of the data limitations these results have to be interpreted with caution. But still they can be assessed as promising.

When it comes to policy implications, from the statistical results it can be inferred that states are more likely to cooperate in response to aircraft transfers rather than land weapons. Moreover, while calculating the probability that influence attempt will be successful, the regime type should also be considered.

## References

- Baldwin, David A. 2002. "Power and International Relations." In *Handbook of International Relations*, eds. Walter Carlsnaes, Thomas Risse, and Beth A. Simmons. Thousand Oaks, CA: SAGE Publications, 177–91.
- Baugh, William H., and Michael L. Squires. 1983. "Arms Transfers and the Onset of War Part I: Scalogram Analysis of Transfer Patterns." *International Interactions* 10(1): 39–63.
- Beardsley, Kyle, and Kristian Gleditsch. 2003. "Polity IVd Dataset." *College Park, MD: Center for International Development and Conflict Management, University of Maryland*.
- Blank, Stephen. 2007. *Rosoboroneksport: Arms Sales and the Structure of Russian Defense Industry*. Carlisle Barracks, PA, Strategic Studies Institute, US Army War College.
- Blanton, Shannon Lindsey. 2000. "Promoting Human Rights and Democracy in the Developing World: US Rhetoric versus US Arms Exports." *American Journal of Political Science* 44(1): 123–31.
- . 2005. "Foreign Policy in Transition? Human Rights, Democracy, and US Arms Exports." *International Studies Quarterly* 49(4): 647–68.
- Buchanan, James M. 1975. "The Samaritan's Dilemma." In *Altruism, Morality and Economic Theory*, ed. E. Phelps. New York: Russell Sage Foundation.
- Bueno de Mesquita, Bruce, James D. Morrow, Randolph M. Siverson, and Alastair Smith. 1999. "An Institutional Explanation of the Democratic Peace." *The American Political Science Review* 93(4): 791–807.
- Bueno de Mesquita, Bruce, and Alastair Smith. 2007. "Foreign Aid and Policy Concessions." *The Journal of Conflict Resolution* 51(2): 251–84.
- . 2009. "A Political Economy of Aid." *International Organization* 63(2): 309–40.
- Bueno de Mesquita, Bruce, Alastair Smith, Randolph M. Siverson, and James D. Morrow. 2005. *The Logic of Political Survival*. Cambridge: MIT Press.
- Caprioli, Mary, and Peter F. Trumbore. 2003. "Identifying 'Rogue' States and Testing Their Interstate Conflict Behavior." *European Journal of International Relations* 9(3): 377–406.
- Caverley, Jonathan, and Ethan B. Kapstein. 2012. "Arms Away: How Washington Squandered Its Monopoly on Weapons Sales." *Foreign Affairs* 91(5): 125–33.
- Craft, Cassidy B. 2002. *Weapons for Peace, Weapons for War: The Effect of Arms Transfers on War Outbreak, Involvement and Outcomes*. New York: Routledge.
- Department of State. The Office of Website Management, Bureau of Public Affairs. 2014. *Conventional Arms Transfer Policy: Advancing American National Security Through*

- Security Cooperation*. U.S. Department of State.  
<http://www.state.gov/t/pm/rls/rm/2014/225118.htm> (January 4, 2016).
- Diehl, Paul F., and Mark J. C. Crescenzi. 1998. "Reconfiguring the Arms Race-War Debate." *Journal of Peace Research* 35(1): 111–18.
- Downs, George W., David M. Rocke, Peter N. Barsoom, and others. 1996. "Is the Good News about Compliance Good News about Cooperation?" *International Organization* 50(3): 379–406.
- Fearon, James D. 1998. "Bargaining, Enforcement, and International Cooperation." *International Organization* 52(2): 269–305.
- Gibler, Douglas M. 2012. *The Territorial Peace: Borders, State Development, and International Conflict*. New York: Cambridge University Press.
- Goldstein, Joshua S. 1992. "A Conflict-Cooperation Scale for WEIS Events Data." *Journal of Conflict Resolution* 36(2): 369–85.
- Johnson, Richard A.I. 2015. "The Role and Capabilities of Major Weapon Systems Transferred between 1950 and 2010: Empirical Examinations of an Arms Transfer Data Set." *Defence and Peace Economics*. DOI: 10.1080/10242694.2015.1033894
- Kassianova, Alla. 2006. "Enter Rosoboronexport." *PonarsEurasia - Policy Memos*.  
<http://www.ponarseurasia.org/memo/enter-rosoboronexport> (April 28, 2016).
- Keller, William W., and Janne E. Nolan. 1997. "The Arms Trade: Business as Usual?" *Foreign Policy* 109(Winter 1997-1998): 113–25.
- King, Gary. 2003. "10 Million International Dyadic Events."  
<http://gking.harvard.edu/publications/10-million-international-dyadic-events?page=11%2C15> (February 16, 2016).
- King, Gary, and Will Lowe. 2003. "An Automated Information Extraction Tool for International Conflict Data with Performance as Good as Human Coders: A Rare Events Evaluation Design." *International Organization* 57(3): 617–42.
- Kinsella, David. 1994. "Conflict in Context: Arms Transfers and Third World Rivalries during the Cold War." *American Journal of Political Science* 38(3): 557–81.
- . 1998. "Arms Transfer Dependence and Foreign Policy Conflict." *Journal of Peace Research* 35(1): 7–23.
- Krause, Keith. 1991. "Military Statecraft: Power and Influence in Soviet and American Arms Transfer Relationships." *International Studies Quarterly* 35(3): 313–36.
- Leeds, Brett Ashley, Michaela Mattes, and Jeremy S. Vogel. 2009. "Interests, Institutions, and the Reliability of International Commitments." *American Journal of Political Science* 53(2): 461–76.
- Legro, Jeffrey W., and Andrew Moravcsik. 1999. "Is Anybody Still a Realist?" *International Security* 24(2): 5–55.

- Lemus, F., and K. H. David. 1963. "An Optimum Allocation of Different Weapons to a Target Complex." *Operations Research* 11(5): 787–94.
- Levine, Paul, Ron Smith, Lucrezia Reichlin, and Patrick Rey. 1997. "The Arms Trade." *Economic Policy* 12(25): 336–70.
- Lipson, Charles. 1991. "Why Are Some International Agreements Informal?" *International Organization* 45(4): 495–538.
- Mattes, Michaela, and Mariana Rodríguez. 2014. "Autocracies and International Cooperation." *International Studies Quarterly* 58(3): 527–38.
- Morgenthau, Hans. 1962. "A Political Theory of Foreign Aid." *The American Political Science Review* 56(2): 301–309.
- Morrow, James D. 1993. "Arms versus Allies: Trade-Offs in the Search for Security." *International Organization* 47(2): 207–33.
- Mullins, A. F. 1987. *Born Arming: Development and Military Power in New States*. Palo Alto: Stanford University Press.
- Oneal, John R., and Bruce Russett. 1999. "The Kantian Peace: The Pacific Benefits of Democracy, Interdependence, and International Organizations, 1885-1992." *World Politics* 52(1): 1–37.
- Paul, T. V. 1992. "Influence through Arms Transfers: Lessons from the U.S.-Pakistani Relationship." *Asian Survey* (32): 1078–92.
- Pearson, Frederic S. 1989. "The Correlates of Arms Importation." *Journal of Peace Research* 26(2): 153–63.
- Perkins, F. M. 1961. "Optimum Weapon Deployment for Nuclear Attack." *Operations Research* 9(1): 77–94.
- Sanjian, Gregory S. 1991. "Great Power Arms Transfers: Modeling the Decision-Making Processes of Hegemonic, Industrial, and Restrictive Exporters." *International Studies Quarterly* 35(2): 173–93.
- . 1998. "Cold War Imperatives and Quarrelsome Clients Modeling US and USSR Arms Transfers to India and Pakistan." *Journal of Conflict Resolution* 42(1): 97–127.
- . 1999. "Promoting Stability or Instability? Arms Transfers and Regional Rivalries, 1950-1991." *International Studies Quarterly* 43(4): 641–70.
- Signorino, Curtis S., and Jeffrey M. Ritter. 1999. "Tau-B or Not Tau-B: Measuring the Similarity of Foreign Policy Positions." *International Studies Quarterly* 43(1): 115–44.
- Simmons, Beth A. 1998. "Compliance with International Agreements." *Annual Review of Political Science* 1(1): 75–93.

- Singer, J. David. 1988. "Reconstructing the Correlates of War Dataset on Material Capabilities of States, 1816–1985." *International Interactions* 14(2): 115.
- Singer, J. David, Stuart Bremer, and John Stuckey. 1972. "Capability Distribution, Uncertainty, and Major Power War, 1820-1965." *Peace, War, and Numbers* 19. <http://www.owlnet.rice.edu/~stoll/P570/sbs.pdf> (February 16, 2016).
- SIPRI, Stockholm International Peace Research Institute. 1971. *The Arms Trade with the Third World*. Stockholm: Paul Elek.
- Sislin, John. 1994. "Arms as Influence The Determinants of Successful Influence." *Journal of Conflict Resolution* 38(4): 665–89.
- Sislin, John Daniel. 1993. "Arms as Influence: The Elusive Link between Military Assistance and Political Compliance." Ph.D. Diss. Indiana University.
- Smith, Ron, Anthony Humm, and Jacques Fontanel. 1985. "The Economics of Exporting Arms." *Journal of Peace Research* 22(3): 239–47.
- Suchman, Mark C., and Dana P. Eyre. 1992. "Military Procurement as Rational Myth: Notes on the Social Construction of Weapons Proliferation." In *Sociological Forum*, 137–61. <http://link.springer.com/article/10.1007/BF01124759> (October 31, 2015).
- Sullivan, Patricia L., Brock F. Tessman, and Xiaojun Li. 2011. "US Military Aid and Recipient State Cooperation." *Foreign Policy Analysis* 7(3): 275–94.
- Tal, David. 2006. "Weapons without Influence: British Arms Supply Policy and the Egyptian-Czech Arms Deal, 1945–55." *The Journal of Imperial and Commonwealth History* 34(3): 369–88.
- Tilly, Charles. 1985. "War Making and State Making as Organized Crime." In *Bringing the State Back In*, eds. Peter B. Evans, Dietrich Rueschemeyer, and Theda Skocpol. New York: Cambridge University Press. [https://www.homeworkmarket.com/sites/default/files/q3/28/02/reading\\_response\\_4\\_2.pdf](https://www.homeworkmarket.com/sites/default/files/q3/28/02/reading_response_4_2.pdf) (February 26, 2016).
- . 1992. *Coercion, Capital, and European States, AD 990-1992*. Oxford: Blackwell.
- "Tools and Solutions - Virtual Research Associates, Inc." <http://www.vranet.com/tools-and-solutions.aspx> (March 16, 2016).
- Walt, Stephen M. 1985. "Alliance Formation and the Balance of World Power." *International Security* 9(4): 3–43.
- . 2005. "Taming American Power." *Foreign Affairs* 84(5): 105-120.
- Weber, Max. 1968. *Politics as a Vocation*. Philadelphia: Fortress Press. <http://nw18.american.edu/~dfagel/Class%20Readings/Weber/PoliticsAsAVocation.pdf> (February 26, 2016).
- Wezeman, Pieter D., and Siemon T. Wezeman. 2015. *Trends in International Arms Transfers, 2014*. SIPRI.

- Wheelock, Thomas R. 1978. "Arms for Israel: The Limit of Leverage." *International Security* 3(2): 123–37.
- Willardson, Spencer. 2013. "Under the Influence of Arms: The Foreign Policy Causes and Consequences of Arms Transfers." Ph.D. Diss. University of Iowa.  
<http://ir.uiowa.edu/etd/2660>.
- Zarzecki, Thomas W. 2002. *Arms Diffusion: The Spread of Military Innovations in the International System*. New York: Routledge.